

# THE MILE MARKER

A CALTRANS PERFORMANCE REPORT

2016 FIRST QUARTER ISSUE

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## The Mile Marker Purpose Statement

The purpose of the *Mile Marker* is to provide a transparent, plain-language accounting of Caltrans' performance.

## Caltrans' Mission

is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

Cover photos and pages 2-3: Interstate 405, looking north from the Harvard Avenue overpass.

Photos taken by Galen Ramos, Caltrans District 12.



## MESSAGE FROM THE CALTRANS DIRECTOR

It's happening all over the country: aging roads and bridges are in desperate need of repair or replacement, but transportation funds are inadequate to get the job done.

In California, funding is worse than flat, it is actually in decline. The dramatically diminished revenue from our undependable gas tax forced the California Transportation Commission in January to propose \$754 million in cuts from its spending plan, delaying and canceling road and transit projects. These are projects sought by communities and commuters up and down the state.

At Caltrans, we are adopting new efficiencies, embracing innovation and working collaboratively with our partners, but the backlog of repairs and needs continues to grow. We estimate that California's transportation infrastructure falls \$5.7 billion deeper in the red with each passing year.

In a cruel irony, our infrastructure is in decline just as the technology of transportation is undergoing an exciting revolution. Vehicles are becoming less dependent on carbon fuels. Computers are aiding navigation and providing assistance that improves safety. Passenger vehicles are even in the early stages of driving themselves. The very concept of transportation is evolving, as more people embrace a broader range of options for getting around. But none of it, highways or transit lines, bike paths or foot bridges can reach its potential without adequate and dependable sources of revenue. Fortunately, Governor Brown has proposed a significant increase in transportation investment in his 2016-17 budget. That budget, however, has yet to gain the strong bipartisan support it needs in the Legislature. The conversation is underway. Stay tuned.

In this issue of *The Mile Marker*, we look at new ways to view our infrastructure with the advent of our [Asset Management](#) program. We examine how declining [gas tax revenues](#) will affect our ability to deliver programs going forward. We outline the hoped-for benefits of the state's first-ever [Bicycle and Pedestrian Plan](#), and we detail a pilot to study the possibility of replacing the gas tax with a road charge. The [Road Charge pilot](#) is an important study of funding alternatives, and I hope some of you will take the opportunity to participate.

I am optimistic about the future of transportation, and hopeful that we will make the smart investments in infrastructure that are crucial to our economy and our quality of life.

  
Malcolm Dougherty  
Director of Caltrans





# CALTRANS MILE MARKERS

Performance Measures		Targets		
Goal 1: Safety and Health				
Worker fatalities in work-zones	Zero per calendar year			
Auto fatalities per 100 million vehicle miles traveled	0.5 or less			
Bicycle, pedestrian fatalities	Reduce by 10% annually	Pedestrian		
		Bicyclist		
Increase and improvement in opportunities for safe and accessible active transportation	100% of funds of allocated vs. programmed	Allocated		
	100% of projects allocated for construction awarded within six months	Awarded		
Goal 2: Stewardship and Efficiency				
Distressed lane miles on state highway system	By FY2024–25, no more than 10% of pavement is distressed.			
Bridge Health Index	By 2020, maintain 95 or better rating on Bridge Health Index.			
Intelligent Transporation System elements	By 2020, at least 90% ITS elements healthy.			
Planned projects delivered in fiscal year	100%			
Goal 3: Sustainability, Livability and Economy				
Use of non-auto transportation	By 2020 Triple percentage of trips on bicycle Double percentage of trips using pedestrian routes Double percentage of trips using transit <i>From 2010-12 California Household Travel Survey baseline (1.5%, 16.6%, 4.4% respectively)</i>	Bicycle		
		Pedestrian		
		Transit		
Pollutants from Caltrans operations for Greenhouse gas (GHG) emissions	By 2020, reduce Caltrans internal operational pollutants per EO-B-18-12.  15% reduction by 2015 and 20% reduction by 2020 from 2010 baseline of 214,983	GHG		



Target Met (by Period)	Current Period	Previous Period	Period Change	Current Period Trend	Desired Trend
<i>“Provide a safe transportation system for workers and users and promote health through active transportation and reduced pollution in communities.”</i>					
✓	<b>0</b> (2015)	<b>0</b> (2014)	<b>0</b>	↔	↓
—	<b>0.67</b> (2012)	<b>0.66</b> (2011)	<b>.01</b>	↑	↓
✓	<b>187</b> (2012)	<b>216</b> (2011)	<b>-13.4%</b>	↓	↓
—	<b>26</b> (2012)	<b>17</b> (2011)	<b>52.9%</b>	↑	↓
—	<b>77.15%</b> (FY 14/15 thru 12/31/2015)	<b>76.00%</b> (FY 14/15 thru 9/30/2015)	<b>1.15</b>	↑	↑
—	<b>3.22%</b> (FY 15/16 thru 12/31/2015)	<b>1.00%</b> (FY 15/16 thru 9/30/2015)	<b>2.22</b>	↑	↑
—	<b>95.70%</b> (thru 12/31/2015)	<b>89.20%</b> (thru 9/30/2015)	<b>6.50</b>	↑	↑
<i>“Money counts. Responsibly manage California’s transportation-related assets.”</i>					
—	<b>16%</b> (2013)	<b>25%</b> (2011)	<b>-9</b>	↓	↓
✓	<b>96.3</b> (FY2013-14)	<b>95.6</b> (FY2012-13)	<b>0.7</b>	↑	↑
—	<b>65.6%</b> (Oct-Dec15)	<b>65.0%</b> (Jul-Sep15)	<b>0.6</b>	↓	↑
—	<b>98%</b> (FY2014-15)	<b>98%</b> (FY2013-14)	<b>0</b>	↔	↑
<i>“Make long-lasting, smart mobility decisions that improve the environment, support a vibrant economy, and build communities, not sprawl.”</i>					
—	<b>1.5%</b> (2012)	<b>.8%</b> (2000)	<b>0.7</b>	↑	↑
✓	<b>16.6%</b> (2012)	<b>8.4%</b> (2000)	<b>8.2</b>	↑	↑
✓	<b>4.4%</b> (2012)	<b>2.2%</b> (2000)	<b>2.2</b>	↑	↑
✓	<b>155,611</b> metric tons (2014)	<b>196,830</b> metric tons (2013)	<b>-21%</b>	↓	↓



# CALTRANS MILE MARKERS

Performance Measures	Targets	
<b>Goal 4: System Performance</b>		
Travel-time reliability	By 2020, one-tier improvement on a three-tiered reliability scale for specified corridors <ul style="list-style-type: none"> <li>Reliable travel range is 0-20%</li> <li>Moderately unreliable travel range is 20-40%</li> <li>Unreliable travel range is more than 40%</li> </ul>	<b>SR-57</b> Northbound - p.m. Orange Co. only
		<b>I-110</b> Northbound - a.m. Harbor Fwy. only
		<b>I-80</b> Westbound - a.m. Contra Costa & Alameda Co's.
		<b>I-210</b> Westbound - a.m. I-605 to SR-134
Percentage of intercity rail trips that reach final destination on time	90% by 2020	
Rate of growth in daily vehicle hours of delay (35 mph or less)	By 2020, less than 8% growth rate	
<b>Goal 5: Organizational Excellence</b>		
Percentage of employees who indicate that they work in a positive environment	Improve 5% annually through 2020	
Percentage of employees who agree that innovation is encouraged in Caltrans	Achieve 75% In 2016 and maintain through 2020	
Percentage of Caltrans employees who say management is open and honest with them	50% in 2015, improve 5% annually through 2020	
Percentage of external survey respondents who say Caltrans does a good or excellent job meeting their needs	Achieve 75% by 2016, then maintain or improve through 2020	
Stakeholders who say Caltrans' communication, professionalism and service levels have improved	Establish baseline in 2015, followed by 5% annual increase	
Stakeholders who give positive feedback on <i>The Mile Marker</i>	Establish baseline in 2015, followed by 5% annual increase	
Partners who agree or strongly agree that Caltrans is a collaborative partner.	Achieve 75% by 2016, then maintain or improve through 2020	



Target Met (by Period)	Current Period	Previous Period	Period Change	Current Period Trend	Desired Trend
<i>“Utilize leadership, collaboration and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers.”</i>					
—	Unreliable (Oct-Dec15)	Unreliable (Jul-Sep15)	N/A	↔	↓
—	Moderately unreliable (Oct-Dec15)	Moderately unreliable (Jul-Sep15)	N/A	↔	↓
✓	Moderately unreliable (Oct-Dec15)	Unreliable (Jul-Sep15)	+1 tier	↓	↓
—	Moderately unreliable (Oct-Dec15)	Unreliable (Jul-Sep15)	return to baseline	↓	↓
—	86.5% (Q4 CY15)	80.2% (Q4 CY14)	6.3	↑	↑
—	13.4% (2014)	15.8% (2013)	-2.3	↓	↓
<i>“Be a national leader in delivering quality service through excellent employee performance, public communication, and accountability.”</i>					
—	50% (2015)	—	—	—	↑
—	40% (2015)	55% (2013)	-15	↓	↑
—	46% (2015)	53% (2008)	-7	↓	↑
—	40% (2015)	68% (2007)	-28	↓	↑
—	36% (2015)	—	—	—	↑
—	43% (2015)	56.7% (2014)	-13.7	↓	↑
—	40% (2015)	65% (2007)	-25	↓	↑



# Ramping Up the Pilot to Study a Mileage-Based User Fee

The California State Transportation Agency (CalSTA) will soon conduct a pilot program to explore a transportation funding mechanism that could replace California's outdated and insufficient gas tax and it is already seeking volunteers.

Following a legislative mandate in 2014, the Road Charge Technical Advisory Committee (TAC) studied mileage-based tax collection (or Road Charge) as an alternative to the gas tax, gathering public input and making recommendations on the design of a pilot program that would research charging drivers by the mile rather than by how many gallons of fuel consumed.

Based on recommendations from the TAC, CalSTA is in the process of developing a pilot test known as the California Road Charge Pilot Program. The pilot will begin in July 2016 and a report of its findings will be submitted to the Legislature, California Transportation Commission (CTC) and TAC by July 2017.

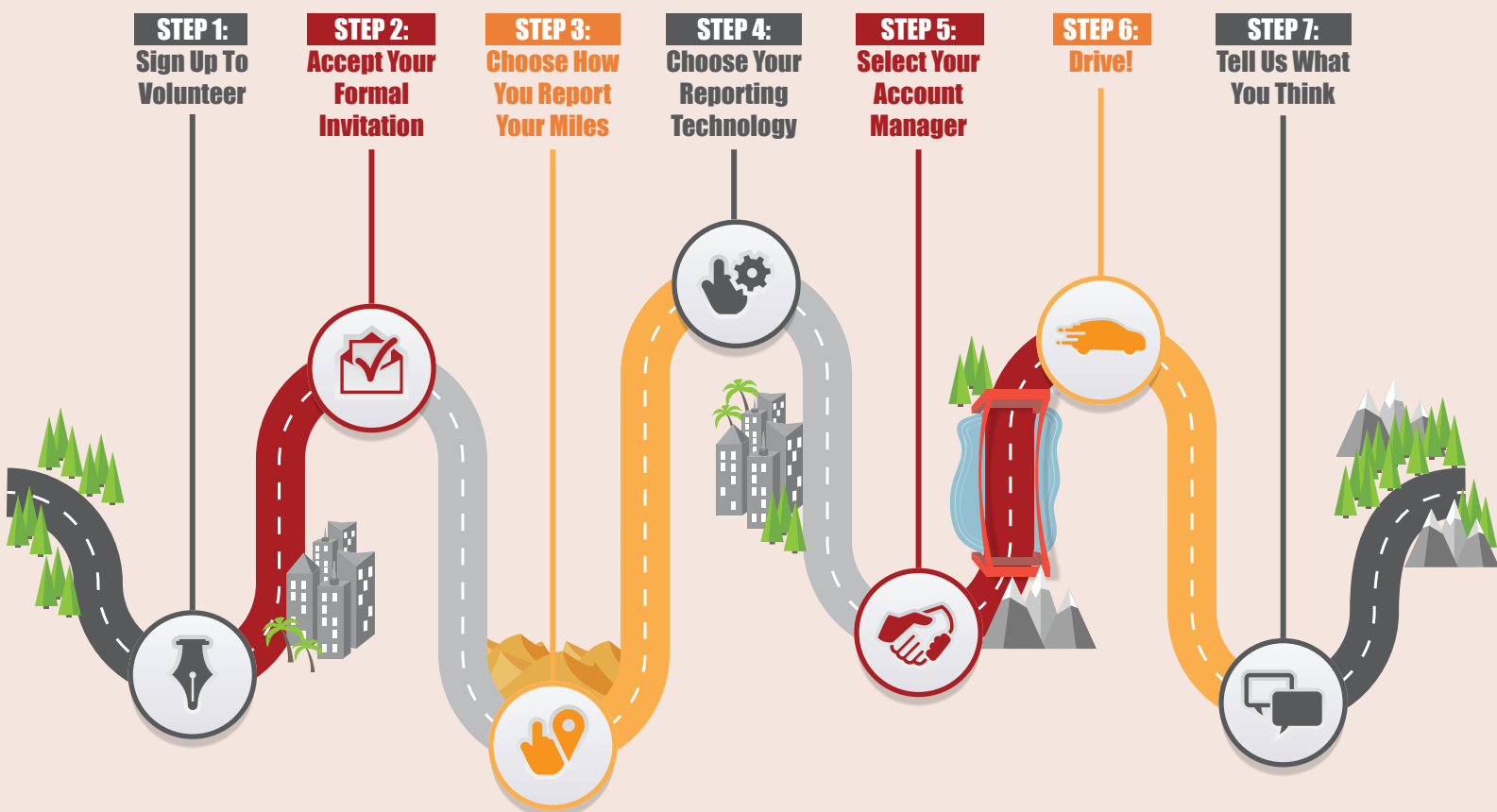
The lack of funding based on the current gas tax has contributed to a projected 10-year funding shortfall of \$57 billion. Since taxes on fuel consumption are the primary source of highway maintenance funding in California, increasing vehicle fuel economy translates directly into decreased funding derived from fuel taxes, especially in the absence of a tax increase. There is also an estimated \$78 billion shortfall for local roads.

The TAC observed that a road charge could be a more equitable way to pay for roadways, since those who drive more – and thus benefit more from the roadways – would contribute in direct proportion to their actual road usage, rather than paying based on fuel purchases.





# A STEP-BY-STEP PROCESS FOR VOLUNTEERS



The TAC's final recommendations for the design of the pilot reflect the input received from a broad and diverse group of stakeholders throughout California. In summary, the TAC has recommended that the pilot should:

- Offer drivers a choice in mileage recording methods.
- Protect drivers' privacy and personal information.
- Determine the impacts of a road charge on various income levels.
- Determine the impacts of a road charge on urban and rural drivers.
- Seek participation from at least 5,000 vehicles that represent the geographic, demographic and socioeconomic diversity of our state.
- Cost drivers nothing to participate.

No revenue will be collected during the pilot, as the road charge payment process will be simulated. Participants will receive a mock bill showing what they paid in gas taxes (which is currently hidden in the price of gas) compared to what they would have paid in a road charge model, in direct proportion to their actual road usage. While pilot participants will not have to submit actual payments, they will have the opportunity to make simulated payments either by submitting their 'payment' via mail or a secure website. This is solely for testing purposes. In turn, the road charge account managers will receive payments and record the transactions to the participants' road charge accounts in a manner that most closely resembles how a future invoicing and payment process could work.

## How Does the California Road Charge Pilot Work?

The California Road Charge Pilot is a field trial of road charging concepts. Volunteers throughout California will test various road charging methods to identify and evaluate issues related to the potential implementation of a road charge program and to assess the potential for mileage-based revenue collection for California's roads and highways as an alternative to the gas tax system. At a minimum, the pilot will:

- Analyze alternative means of collecting road usage data, including manual alternatives that do not rely on electronic vehicle location data.
- Collect a minimum amount of personal information, including location tracking information, necessary to implement the road charge program.
- Ensure that processes for collecting, managing, storing, transmitting and destroying data are in place to protect the integrity of the data and safeguard the privacy of drivers.

*continued next page*

# Road Charge Activity Timeline

Pilot Development  
January 2016

Live Pilot  
July 2016

Final Report  
to Legislature  
June 2017

Recommendations  
to Legislature  
December 2017

(cont.)

## How Will the Road Charge be Tested During the Pilot?

The pilot will give participants several options for reporting mileage, including several manual methods as well as automated options. These options include:

- **Time Permit:** A permit that allows unlimited road use in California for a specific period of time, such as a year, month or week.
- **Mileage Permit:** A block of miles based on motorists' expected use of California's roads.
- **Odometer Charge:** Payment would be remitted after periodic manual odometer readings. The odometer could be read by a certified representative or the motorist could self-report the odometer reading and reconcile with a verified reading later.
- **Automated Mileage Reporting with No Location Data:** Choice of in-vehicle technology that reports mileage traveled to a third-party account manager that invoices the participant. However, the equipment does not provide any location data.
- **Automated Mileage Reporting with General Location:** Similar to automated mileage reporting, but with location-based technology included. General location does not provide the level of detail that would be needed to estimate a motorist's location street-by-street.

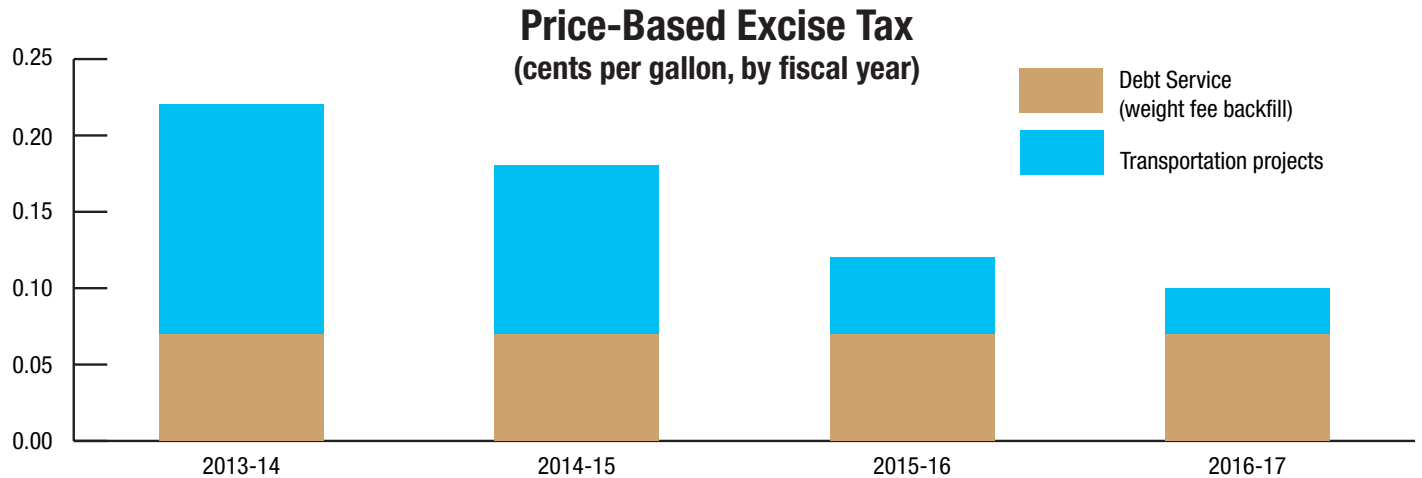
CalSTA, CTC, TAC and Caltrans have begun to recruit 5,000 volunteer participants that reflect the geographic and socioeconomic diversity of the state. Volunteers can enroll in the pilot via the [California Road Charge Pilot Program](#) website and by submitting a volunteer application. As pilot volunteers, drivers will be able to choose from one of several mileage reporting methods. Volunteering is free and no money will be exchanged.

Contributor: Brady Tacdol,  
Road Charge Project Manager

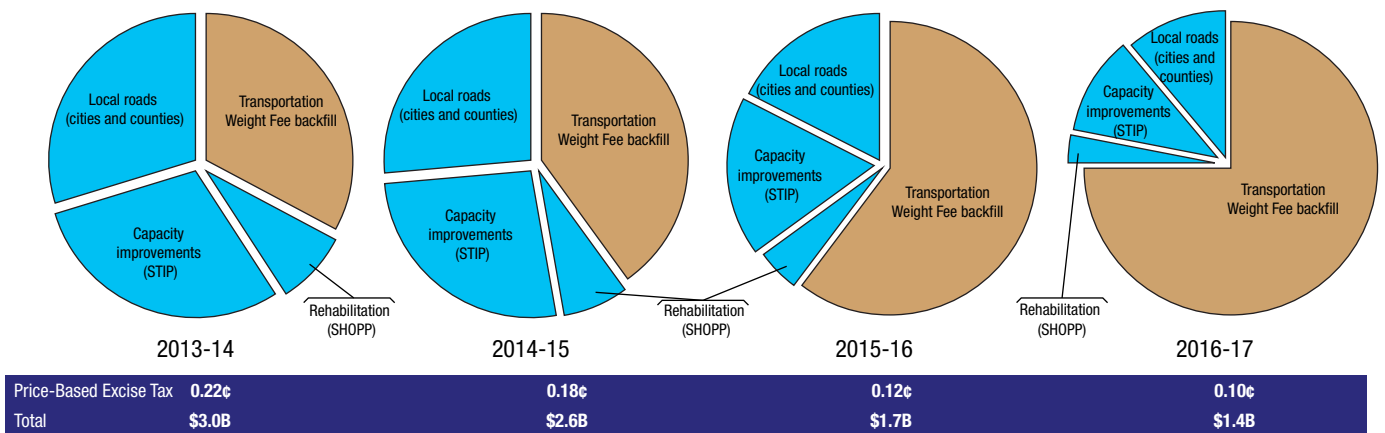




# Revenue from Gas Tax Continues to Slide



## How It's Spent



Every other year, Caltrans develops a fund estimate that forecasts revenue, then compares it against commitments for ongoing efforts to project how much funding is available for additional projects. The latest fund estimate shows a slight increase to major maintenance, but also a significant decrease to State Transportation Improvement Program (STIP) funding, which pays for highway improvements, intercity rail and transit improvements.

This reduction in funds is a direct result of the fall in the price-based excise tax – collected on each gallon of fuel sold – from 18 cents per gallon last year, to 12 cents per gallon in the current fiscal year. Due to continuing low prices, the price-based excise tax is expected to be 9.8 cents in 2016-17. The reduction in the price-based excise tax impacts the STIP, the cities and counties and the SHOPP.

As a result, based on the most realistic revenue projection available, the California Transportation Commission announced at its January meeting that it was reducing its fund estimate for the STIP by \$754 million over the next five years. This means that many projects throughout the

state will have to be delayed or removed from the program. Funding for local roads will also be cut from \$301 million in 2015-16 to \$153 million in the proposed budget for next year. The same cut for capacity improvements (STIP) is also being proposed. Likewise, funding for rehabilitation will be cut from \$82 million to \$42 million.

Underfunding transportation projects and the huge swings in revenue are but a symptom of the bigger problem: gasoline is no longer a good indicator of how much the highways are being used. With better gas mileage and alternative fuel vehicles, there is no longer a connection between how much someone uses the state highway system and how much taxes one pays to maintain and improve that system.

Gov. Edmund G. Brown Jr. called a special session of the Legislature to examine tax law as it relates to transportation in an attempt to remedy the problem. Subsequently, he included his plan in the proposed Governor's Budget released in January. The deadline for adoption of his proposal is June 30.

Source: Division of Budgets  
Contributor: Gina Coates



# All Roads Lead to

# COMPLETE STREETS



Over the next five years, Caltrans plans a steady increase in the number of projects that move California closer to a fully integrated system that provides safe mobility for bicyclists, pedestrians, transit vehicles, truckers and motorists.

This comes together in the *Complete Streets Implementation Action Plan 2.0* (CSIAP 2.0), which applies to all activities and products on the state highway system. This responds to wishes voiced by the public, Legislature and the Governor's Office to help the state reduce greenhouse gas emissions through non-auto vehicle methods.

The action plan also supports the new Caltrans 2015-2020 Strategic Management Plan (SMP), which calls for a 20 percent annual increase in the number of Complete Street projects by 2020, after determining the baseline in 2016.

That is a significant departure for a department once focused almost exclusively on motor vehicles. Of the 386 projects that made it into the final design phase in fiscal year 2014-15, 26 percent included one or more Complete Street features. That increased to 33 percent in 2015-16, marking the new baseline. It is a sea change in the way Caltrans looks at projects.

A good example can be found in Redding. The Downtown Redding Pavement Preservation and Bike Lane Project was initially planned, as its name suggests, as a simple pavement resurfacing project. But it was transformed into an intermodal model that serves as an example of what Caltrans is looking to do elsewhere.

Working with the community's support, Caltrans and the Redding Public Works Department created a "road diet," reducing a downtown thoroughfare from three to two lanes to accommodate a bike lane. A second bike lane was added on an adjacent street. The project created vital transportation links between modes, such as bicycle, pedestrian, transit and passenger rail. It connects two highly traveled river trails with a single and safe, multimodal corridor providing transportation system connectivity and efficacy.

The project (which is detailed in the *Second Quarter 2015 Mile Marker*) has provided safe and convenient, nonmotorized transportation options, which in turn improve the quality of life, quality of health of residents by providing active transportation alternatives and may ultimately promote future economic development within the downtown urban core.

## Getting There

The Complete Streets action plan has two significant hurdles: data and guidelines.

Transportation departments across the nation have, for decades, collected data about traffic patterns and pavement conditions, but much less on active





*A Complete Street was created for Castro Street at West Evelyn Avenue in the Bay Area town of Mountain View.*

transportation. Similarly, longstanding project delivery guidelines don't always align with the Complete Streets approach.

For example, programs within the State Highway Operation and Protection Program (SHOPP) have historically been divvied up by funding for certain types of projects, which makes it difficult to take a multi-user or multi-objective Complete Streets approach on every SHOPP project. This structure is being reevaluated with the Transportation Asset Management Program, which focuses on decision-making based on quality information and well-defined objectives, and a performance-based approach in the Strategic Management Plan to achieve the new mission, vision and goals.

Overall, the CSIAP 2.0 has made a lot of progress, especially through changes in design standards and design flexibility, as well as changes in planning procedures and outcomes, and cross-functional coordination and communication through the Strategic Management Plan. More than 100 action items were reported in the CSIAP 2.0. Of those, 14 actions were identified by a Complete Streets Technical Advisory Committee as high-focus items. These actions are important to make institutional changes to effect complete streets in all Caltrans

work. The expectation is that 80 percent of these will be implemented by December 2016 and all 14 by 2018.

## Recently Completed and 2016 High-Focus Action Items

- Updated the Highway Design Manual guidance on design speed, place types, lane and shoulder widths, and curb extensions (bulb outs). Discussed the state-of-the-practice and latest research on trees in the medians of conventional highways. Provided recommendation and a delivery plan for changes to the Chief of the Division of Design. (Completed)
- Evaluated the use of Multimodal Level of Service from the Highway Design Manual for assessing impacts and related mitigation in Intergovernmental Review projects. (Completed)
- Developed a comprehensive, data-driven Strategic Highway Safety Plan (SHSP) Update that defines State safety goals and describes a program of strategies to improve safety on all public roads for all modes of transportation, including pedestrian and bicycle, to be considered in the plan. (Completed)
- Prepare and implement outreach training for the Active Transportation Program guidelines. (April 2016)

*Contributor: Smart Mobility Branch Chief Ann Mahaney,  
Office of Sustainable Community Planning*





# Asset Management

## Piecing the Puzzle Together

Until this past year, the economy as a standalone concept was not among the yardsticks Caltrans used to measure the potential benefits of a project.

But as Caltrans moves toward a data-driven Asset Management Plan, it is. Caltrans intends to measure in advance whether a project will contribute toward sustainability, livability and the economy, and whether it will promote safety and health, and how much it will improve system condition and performance.

In its initial pilot for the Asset Management Plan, proposed projects will be scored using criteria designed to measure the total benefits of a project that move Caltrans toward the goals of its recently adopted Strategic Management Plan while remaining committed to its fix-it-first approach to maintaining the state's transportation infrastructure.

All of these project benefits, when added up, allow Caltrans to rank each project by how well it helps the department meet all of its goals. This is important since each project is competing for finite funding. Naturally, if there's a safety issue, that will be taken care of, but if the project can also meet health, sustainability and efficiency goals, for example, then it rises in the pecking order.

As Caltrans moves toward full implementation of the Asset Management Plan by 2020, this scoring system will allow the department to better evaluate transportation investments. For example, the average motorist might see roadside rest areas as merely a convenient restroom on long stretches of highway and a place to stretch your legs away from traffic. But they serve as a safe place as well for tired truckers to get off the road and catch up on their sleep. And if a renovation of an old rest area can also make them more compliant to the Americans with Disabilities Act and perhaps add solar-power charging stations for electric vehicles, it adds more services for the public while helping to make our highways safer for everyone.

This new prioritization approach requires State Highway Operation and Protection Program (SHOPP) funding to be allocated in a way that supports the multiple-objective project model. This sounds like a simple enough change, however, legacy program definitions and software limitations make this more of a challenge. If implementation goes as planned, and is fine-tuned based on results of the pilot, every plan, every activity will bring Caltrans closer to fulfilling its mission.

For more on the expected benefits of the Asset Management plan, visit the [2015 Fourth Quarter Issue](#).

*Contributor: State Asset Management Engineer Michael B. Johnson*

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*Doyle Drive has been re-envisioned as the Presidio Parkway. It improves access to the Presidio of San Francisco, and includes the unique features of a parkway, rather than a freeway.*



# Sustainability Plan

## for an Ever-Greener California

Caltrans took steps in 2015 to become a better steward of the environment. The department used less energy, cut its water consumption in half, built carbon-neutral facilities and added more than 100 plug-in vehicles to its fleet.

In December 2015, Caltrans expanded its already ambitious sustainability plan with the adoption of the *2015 Road Map to Achieving Executive Orders B-18-12 and B-16-12* (Road Map), which ties to the year-old *Caltrans Strategic Management Plan* (SMP) and encompasses all Caltrans operations. It incorporates the new *California Department of General Services (DGS) Management Memos*, which implement the governor's executive orders. And most critically, the Road Map includes target dates and identifies those responsible for accomplishing the tasks.

Here's a brief look at how Caltrans is putting each of the executive orders into action:

### Executive Order B-18-12: The Green Building Action Plan

This order from 2012 incorporates green practices into building and highway system operations for energy, water, materials and purchasing efficiencies, enhances indoor and outdoor air quality and reduces greenhouse gas (GHG) emissions. As reported in *The Mile Marker* in September 2015, Caltrans reduced its greenhouse gas emissions from its fleet of vehicles, buildings and networks of lights and signals by almost 38 percent from 2010 to 2014, which exceeds the goal for 2020.

Caltrans is also converting its buildings into Zero Net Energy buildings – meaning these buildings through such efficiencies as solar power create as much energy as they use. The goal is for half of all new construction and major renovations to be Zero Net Energy by 2020 and 100 percent by 2025. That same year, half of the department's existing building area, or 3.55 million square feet, would be required to be Zero Net Energy.

*continued next page*





*“... the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions ...”*

*~Governor Edmund G. Brown*

(cont.)

## **EO B-30-15: Greenhouse Gas Emission Reduction Targets for 2030**

The Green Building Action Plan predates EO B-30-15, which established a greenhouse gas reduction target of 40 percent below 1990 levels by 2030 – and hailed by the Governor’s Office as “the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half.” This is one strategy to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. The action plans outlined in the latest Road Map explain how Caltrans will help California meet those goals.

Other substantial programs were established in 2015 to help Caltrans meet greenhouse gas emissions goals. They include the [Active Transportation Program](#) (updated), [Class IV Bikeways](#), Complete Streets (see story, [page 12](#)), [Intelligent Transportation Systems](#), [multimodal system planning](#), regional transportation plans and sustainable community strategies.

## **EO B-16-12: The Zero Emission Vehicles (ZEV) Action Plan**

This plan is anticipated to be complete by June 2016. Caltrans, with 118 plug-in fleet vehicles, is already exceeding this executive order, which required that of the new vehicles purchased in 2015, 10 percent had to be electric vehicles and that rate would rise to 25 percent by 2020. To further promote the use of ZEVs, in October 2015, Director Malcolm Dougherty issued a memo directing Caltrans facility managers to encourage employee use of state-owned electric vehicle charging stations.

In the future, Caltrans’ Division of Equipment plans to look beyond the ZEV plan light-duty fleet requirements to incorporate heavy duty ZEVs in Caltrans’ fleet when available, ways to increase ZEV adoption statewide, and other ways to increase the use of low-carbon fuels. A vehicle replacement plan through 2020 will be developed by June.



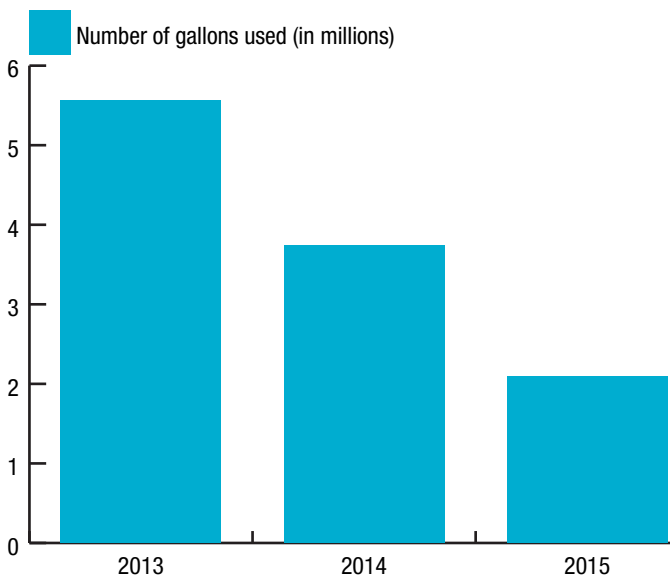
## EO B-29-15: Drought State of Emergency

In 2012, EO B-18-12 required 10 percent water reduction by 2015 and 20 percent by 2020 as measured against 2010 levels. In January 2014, Gov. Jerry Brown issued the Drought State of Emergency proclamation. As a result, Caltrans raised the bar in 2014, with Director Dougherty setting a goal of a 50 percent reduction in water use for irrigation and landscaping, and committed to examining all ongoing activities for further efficiencies. Subsequently, EO B-29-15 was handed down by Gov. Jerry Brown in April 25, 2015, to further mandate 25 percent reductions for all urban water users and extended the mandate through February 2016.

Caltrans used many methods to reduce water consumption, including “smart” controller upgrades, prioritizing landscaping projects, streamlining water use tracking, and water conservation and drought action planning in buildings and along highways.

In April 2015, DGS reported that state agencies used 23 percent less water in 2014 compared to 2013. For all state government, water use fell from 19.4 billion gallons in 2013 to 14.9 billion gallons in 2014, and Caltrans accounted for more than half of the water conserved by all state agencies (see [December 2015 article](#)). In 2015, Caltrans achieved a 53 percent reduction in water use, meeting the director’s aggressive goal.

Comparison of water consumption during first three quarters 2013-15:



A 32 percent reduction was achieved between the 2013 and 2014 calendar years, and a 61 percent reduction was achieved comparing 2010 with 2014.

## EO B-32-15: Sustainable Freight Action Plan

As ordered in July 2015, the development and implementation of this plan focuses on transitioning to zero-emissions freight technology, freight efficiency improvements and increasing the competitiveness of California’s freight system. Caltrans is working to develop an integrated freight action plan by July 2016 that establishes clear targets to improve freight efficiency, transition to zero-emission technologies and increase competitiveness of California’s freight system to achieve 40 percent below 1990 levels by 2030. A draft “California Sustainable Freight Strategy” was released in February 2016 and encompasses: engines and vehicles; energy and fuels’ freight infrastructure and facilities; funding and incentives; freight system efficiencies; and economy and jobs.

Source: Sustainability Program, Road Map to Achieving Executive Orders B-18-12 & B-16-12

## California by the Numbers

Mass Transportation (Bus, rail, ferry, fiscal year 2013–14):	
Passenger trips .....	1.8 billion
Passenger fares.....	\$1.75 billion
Vehicle miles.....	603 million
Population (as of 2010 Census): .....	
37,253,956	
Registered vehicles (as of January 1, 2015): .....	
33,550,486	
Licensed drivers (as of January 1, 2015): .....	
25,014,468	
Full-time Caltrans employees (as of September 30, 2014): .....	
18,415	
Adopt-A-Highway adoptions through July 31, 2015: .....	
2,961	
Vista points:.....	146
Roadside rest areas:.....	87





# California's First **BIKE AND PEDESTRIAN PLAN**

Caltrans is drafting the first-ever [California Statewide Bicycle and Pedestrian Plan](#) (CSBPP). The plan – which will be written with input from a diverse group of stakeholders and the public – is expected to be completed in February 2017. It will guide Caltrans' efforts to include bicycle and pedestrian considerations in all department policies, programs and projects.

The plan will lead to improved connections between the state's bicycle and pedestrian paths and the network of local and regional roads, public transit, and intercity and passenger rail. The plan will not replace existing policies or implementation plans at the regional and local levels, but will look to complement and connect to local networks.

The CSBPP will be important in helping the state meet the bicycle, pedestrian and complete streets performance-measure targets identified in the Strategic Management Plan, including mandates to improve safety for pedestrians, bicyclists and those traveling by car or transit. The SMP calls for tripling bicycle travel and doubling pedestrian and

transit travel by 2020. According to the 2010-2012 California Household Travel Survey, 1.5 percent of all trips in California are by bicycle, 16.6 percent are by foot and 4.4 percent are by transit, roughly double the percentages from the previous survey in 2000.

Statewide, the CSBPP will include evaluation of existing policies, programs, and guidance provided by Caltrans for active transportation (generally referring to nonmotorized) modes. This effort will build on Caltrans' existing goals established in the California Transportation Plan.

The historic bicycle plan will include performance measures and specific strategies to meet state goals and objectives. It also will describe public outreach and engagement that will allow Caltrans to understand community walking and bicycling needs. A statewide bicycle map will also be developed for the plan.

The Caltrans Division of Transportation Planning is leading this effort, which involves close coordination of multiple stakeholders, including:

- The Technical Advisory Committee to provide diverse technical knowledge.
- The Policy Advisory Committee to advise on policy development and public outreach.





- Active transportation advocates and community-based organizations to advise on priorities at the local levels and in key interest areas.
- Regional agencies and local jurisdictions/municipalities to provide input about policy needs and areas for stronger collaboration.
- Caltrans headquarters and each of its 12 district offices to provide localized input and guidance on plan development.

The Bicycle and Pedestrian Plan is but one way Caltrans is boosting nonmotorized transportation in California. Caltrans developed a Complete Streets Implementation Action Plan (see article, page 12) and is a major sponsor of May is Bike Month, and the [California Bicycle Summit](#) and will be active at the [2016 PedsCount Summit](#).

Caltrans continues to significantly invest in nonmotorized transportation. In the past 20 years, Caltrans has directed more than a \$1 billion in state and federal funds toward bicycle and pedestrian projects in California. The Active Transportation Program, now in its second year, has \$720 million in bicycle and pedestrian projects programmed through fiscal year 2018-19. Also, Caltrans manages a variety of federal programs supporting nonmotorized transportation that combine for about \$200 million a year for bicycle and pedestrian projects.

A recent example of a Caltrans' bicycle project is the State Route 89 Mousehole Pedestrian/Bicycle Improvement Project in the Town of Truckee – a high-priority project federally funded through the Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users. The Mousehole has long been a bottleneck for traffic and a hazard for pedestrians and bicyclists passing through the shoulderless roadway that tunneled beneath the Union Pacific Railroad tracks. It was determined that widening the tunnel would be too costly, so it was decided to build a separate pedestrian/bicycle undercrossing.

*Contributor: Paul C. Moore,  
Office of Active Transportation and Special Programs*



# **‘Fix-It-First’**

## **Caltrans Proposes \$10 Billion Plan**

The 2016 State Highway Operation and Protection Program (SHOPP) is the state’s “fix-it-first” program that funds the repair and preservation of the State Highway System (SHS) and safety improvements. By continuously repairing and modernizing the SHS, the SHOPP protects the enormous investment that has been made over many decades to create and manage the approximately 50,000 lane-mile SHS.

For the 2016 SHOPP, Caltrans is proposing to implement \$10 billion in projects over four years, covering fiscal years 2016-17 through 2019-20. Consistent with Senate Bill 486 (DeSaulnier, 2014), Caltrans is submitting this proposed program of projects to the California Transportation Commission (CTC) for adoption and submittal to the Governor and Legislature by April 1.

SB 486 requires that Caltrans invest SHOPP funds in an asset-management, performance-based manner, with a robust implementation of this approach by 2020 (For more on Asset Management, see page 14). Similarly, federal transportation programs are implementing performance-based funding criteria and performance targets focused on specific asset classes. The 2016 SHOPP is transitioning to this performance-driven asset management paradigm. For the 2016 SHOPP, the CTC approved four asset classes for the first phase of this transition: pavement, bridge, culverts and Intelligent Transportation Systems components.

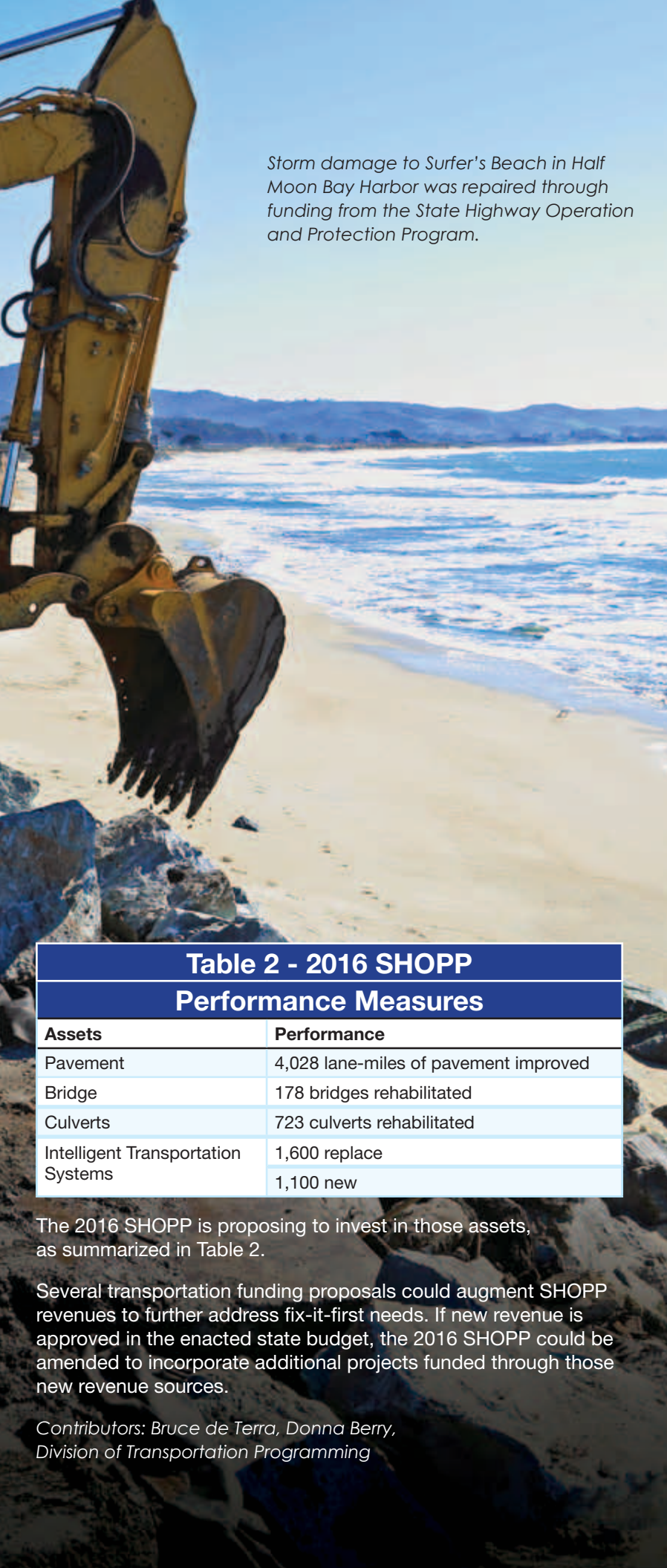
**Table 1 - 2016 SHOPP**

<b>Program Categories</b>	<b>2016 SHOPP Total (\$ millions)</b>
Major Damage Restoration	1,015
Collision Reduction	2,387
Mandates	632
Bridge Preservation	1,486
Roadway Preservation	3,107
Mobility	646
Roadway Preservation	97
Facilities	80
Minor Program	610
<b>Total</b>	<b>10,060</b>

\* Un-escalated dollars

\*\* Excludes Proposition 1B bond funds





Storm damage to Surfer's Beach in Half Moon Bay Harbor was repaired through funding from the State Highway Operation and Protection Program.

**Table 2 - 2016 SHOPP  
Performance Measures**

Assets	Performance
Pavement	4,028 lane-miles of pavement improved
Bridge	178 bridges rehabilitated
Culverts	723 culverts rehabilitated
Intelligent Transportation Systems	1,600 replace 1,100 new

The 2016 SHOPP is proposing to invest in those assets, as summarized in Table 2.

Several transportation funding proposals could augment SHOPP revenues to further address fix-it-first needs. If new revenue is approved in the enacted state budget, the 2016 SHOPP could be amended to incorporate additional projects funded through those new revenue sources.

*Contributors: Bruce de Terra, Donna Berry,  
Division of Transportation Programming*

## 2015 Awards to Caltrans and its Employees

**Governor's 2015 Medal of Valor.** Sixteen Caltrans employees received the highest honor the State of California can bestow upon employees for an extraordinary act of heroism. In many instances, recipients risked their own lives to save another.

**American Road & Transportation Builders Association's Roadway Work Zone Safety Awareness Award.** The "Be Work Zone Alert" campaign featuring the children of Caltrans employees became a national model for raising awareness of highway work zone safety.

**2015 Environmental Excellence Awards** from the Federal Highway Administration.

- Excellence in Programmatic Agreements: Improvements in Historic Preservation.
- Excellence in Roadside Resource Management and Maintenance: Philip S. Raine Safety Roadside Rest Area.

**American Association of State Highway and Transportation Officials.** The U.S. Highway 101/Prunedale Improvement Project was western regional winner of the "Quality of Life/Community Development, Large" category.

**American Association of State and Highway Transportation Official's 2015 People's Choice Award.**

The Bay Bridge Project earned the \$10,000 grand prize to support a charity of the winner's choosing. Caltrans chose the California Transportation Foundation, which will use the funds to support the annual Caltrans Workers Memorial Ceremony honoring employees who died in the line of duty.

The nation's first department of transportation to achieve Greenroads certification, and a bronze rating for the first phase of the Presidio Parkway project, a 1.6-mile, \$1 billion roadway built along the environmentally sensitive San Francisco Bay.



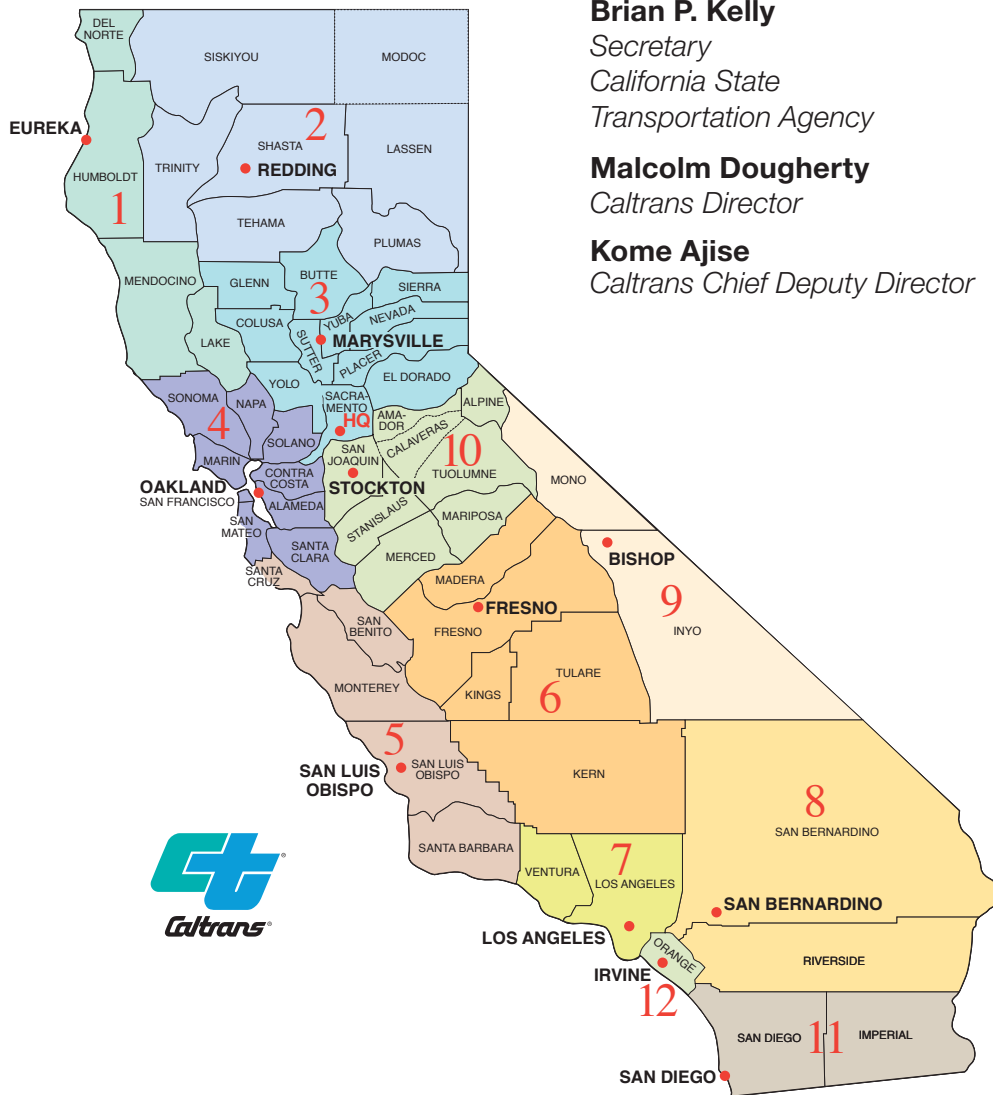
## *From the Caltrans Archives*

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*San Diego's Cabrillo Freeway (Laurel Street Overcrossing),  
taken Aug. 22, 1950, at 5 p.m., during peak traffic.*

# Caltrans Districts



**Edmund G. Brown Jr.**  
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State of California

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California State  
Transportation Agency

**Malcolm Dougherty**  
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All photography provided  
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Caltrans Public Affairs  
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Sacramento, CA 95814

## For more information on Caltrans, please visit the following links:

California Department of Transportation  
<http://www.dot.ca.gov>

Mile Marker Archives  
<http://www.dot.ca.gov/MileMarker/index.html>

QuickMap  
<http://quickmap.dot.ca.gov>

Mission, Vision, Goals  
<http://www.dot.ca.gov/hq/paffairs/about/mission.htm>

Caltrans Social Media  
<http://www.dot.ca.gov/socialmedia>

Reports to the California Legislature  
<http://www.dot.ca.gov/reports-legislature.htm>

2013 10-Year SHOPP Plan  
[http://www.dot.ca.gov/hq/transprog/SHOPP/prior\\_shopp\\_documents/10yr\\_SHOPP\\_Plan/2013\\_Ten\\_Year\\_SHOPP\\_Plan.pdf](http://www.dot.ca.gov/hq/transprog/SHOPP/prior_shopp_documents/10yr_SHOPP_Plan/2013_Ten_Year_SHOPP_Plan.pdf)

Division of Maintenance  
<http://www.dot.ca.gov/hq/maint>

Complete Streets Program  
[http://www.dot.ca.gov/hq/tpp/offices/ocp/complete\\_streets.html](http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html)

Smart Mobility Framework  
<http://www.dot.ca.gov/hq/tpp/offices/ocp/smf.html>

Freight Mobility Plan  
<http://dot.ca.gov/hq/tpp/offices/ogm/cfmp.html>

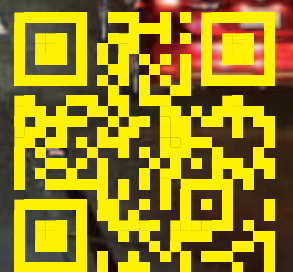
Caltrans Performance Measurement System  
<http://pems.dot.ca.gov/>

Send comments to: [Mile.Marker@dot.ca.gov](mailto:Mile.Marker@dot.ca.gov)





scan QR code to view the  
interactive online version



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